PHASE I BOOK EXPLOITATION SOV/4178

Akademiya nauk Ukrayins'koyi RSR. Instytut budivel'noyi mekhaniky

Zadachi termopruzhnosti v energomashynobuduvanni (Problems of Thermoelasticity in Power-Machinery Construction) Kyyiv, 1960. 176 p. 1,000 copies printed.

Ed. of Publishing House: T.K. Remeznik; Resp. Ed.: H.M. Savin, Academician, Academy of Sciences UkrSSR; Tech. Ed.: O.M. Lyzovets'.

PURPOSE: This book is intended for turbine designers.

COVERAGE: This book is a collection of 8 Ukrainian articles based on work under the general supervision of A.D. Kovalenko. Each article has a short summary in Russian. The object of the study is to test turbine elements for stress conditions, especially those due to nonuniform heating. References accompany each article.

AVAILABLE: Library of Congress

Card 3/3

(6)

AC/bl/afm
10/4/60

Bobyr, I.S.

BOYR', I. S. 20

PHASE I BOOK EXPLOITATION SOV/6086

Nauchnoye soveshchaniye po teplovym napryazheniyam v elementakh turbomashin. 2d, Kiyev, 1961.

Teplovyye napryazheniya v elementakh turbomashin; doklady nauchnogo soveshchaniya., vyp. 2 (Thermal Stresses in Turbomachine Parts; Reports of the Scientific Conference, no. 2). Kiyev, Izd-vo AN UkrSSR, 1962. 174 p. 1800 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut mekhaniki.

Resp. Ed.: A. D. Kovalenko, Academician, Academy of Sciences UkrSSR; Ed.: T. K. Remennik; Tech. Ed.: A. M. Lisovets.

PURPOSE: This collection of articles is intended for scientific workers and turbine designers.

Card 1/6

20

Thermal Stresses (Cont.) SOV/6088

COVERAGE: The book contains 18 articles dealing with investigations connected with thermal stresses in turbine components. Individual articles discuss thermoelasticity, thermoplasticity, thermal conductivity, and temperature fields. No personalities are mentioned. References accompany 17 articles. The conference recommended broadening the theoretical and experimental investigations of aerothermoelastic and aerothermoplastic problems, the development of investigations of general problems of the theory of thermoelasticity and thermoplasticity based on the thermodynamic principles of reversible and nonreversible processes, the development of effective calculation methods for thermal stresses taking into account plastic deformations and creep in thin- and thick-walled structural members under stationary and nonstationary operating conditions, the development of experimental-research methods for thermometry and tensiometry in connection with modern operational conditions of mechanical structures, and the broadening of investigations of problems in the thermostrength of structures, especially of those operating under conditions of frequent and sharp temperature changes.

Card 2/6

AVAILABLE: Library of Congress

SUBJECT: Mechanical Engineering

Card 6/6

AD/dk/jk
11-30-62

S/124/63/000/003/040/065
D234/D308

AUTHOR: Bobyr', I. S.

TITLE: Electrical simulation of the equations of symmetrically deformed circular plates of varying thickness

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1963, 16, abstract 3V104 (Dokl. 4-y Mezhvuz. konferentsii po primeneniyu fiz. i matem. modelirovaniya v razlichn. otraslyakh tekhn. Sb. 1, M., 1962, 301-312)

TEXT: The author describes the methods of electrical simulation, on a 1-dimensional network with run-offs, of problems on symmetrically deformed circular plates of varying thickness. A numerical example refers to the case of a plate with linearly varying thickness and rigidly clamped inner edge, the outer edge being subject to transverse forces and a bending moment. The procedure of solution with the aid of simulation of problems of simultaneous bending and elongation of a plate is shown, and data of a numerical example are given. [Abstracter's note: Complete translation.]

Card 1/1

L 19314-63 EWT(1)/EPF(c)/EPF(n)-2/BDS ASD/AFFTC/IJP(C)/SSD Pr-4/Pu-4
ACCESSION NR: AR3005868 S/0271/63/000/007/B027/B027 64

SOURCE: RZh. Avtomatika, telemekhanika i vy*chislitel'naya tekhnika, Abs. 7 B129

AUTHOR: Bobyr', I. S.

TITLE: Application of an electrointegrator to solving heat conduction problems

CITED SOURCE: Teplovye napryazheniya v elementakh turbomashin, vy*p. 2, Kiyev, AN USSR, 1962, 162-170

TOPIC TAGS: electric integrator, heat conduction equation

TRANSLATION: A nonstationary heat conduction equation is formulated for an isotropic, but inhomogeneous body with heat sources; it is shown that a method of electrical simulation based on the analogy between equations which describe a stationary temperature distribution in a body and the potentials in an electrical network can be applied to the solution of problems of this type. Changes in the distribution of heat in time is investigated by successive determination of stationary states of the system. The possibilities in the method described here are illustrated by the results from solving two problems which were solved in the Kiev University with the objective of evaluating the accuracy of the solution. There

Card 1/2

L 19314-63
ACCESSION NR: AR3005868

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are five illustrations and two tables. There are six references. I. V.

DATE ACQ: 15Aug63 SUB CODE: GE, MM ENCL: 00

Card 2/2

VOROB'YEVA, G.I.; BOBYR', L.M.

Organic acids of hydrolysis substrates and method for their determining. Sbor.trud.NIIGS 12:129-137 '64.

(MIRA 18:3)

KRYUCHKOVA, A.P.; VOROB'YEVA, G.I.; BOBYR', L.M.

Effect of carbon source in the medium on amino acid synthesis by yeasts. Prikl. biokhim. i mikrobiol. 1 no.1:78-82 Ja-F '65.
(MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut biosinteza belkovykh veshchestv, Moskva.

BOBYR', V.V.; STRIZHAK, V.I. [Stryzhak, V.I.]; TOTSKIY, I.A. [Tets'kyi, I.A.]

Angular distribution of 2.8 Mev. neutrons elastically scattered by nuclei of light elements. Ukr. fiz. zhur. 3 no.6:836-837 N-D '58. (MIRA 12:6)

1. Institut fiziki AN USSR.
(Neutrons--Scattering)

BOBYR', V.V. [Bobyr, V.V.]; GRONA, L.Ya. [Hrona, L.IA.]; STRIZHAK, V.I. [Stryzhak, V.I.]

Amplitude-time selection of pulses for investigating the interaction of neutrons from the D (T,d) He^4 reaction with atomic nuclei. Ukr. fiz. zhur. 5 no. 5:591-596 S-O '60. (MIRA 14:4)

1. Institut fiziki AN USSR.
(Nuclear reactions) (Neutrons) (Nuclei, Atomic)

STRIZHAK, V.I. [Stryzhak, V.I.]; BOBYR', V.V. [Bobyr, V.V.]; GRONA, L.Ya. [Hrona, L.IA.]

Angular distribution of 14 Mev. neutrons elastically scattered by atomic nuclei. Ukr. fiz. zhur. 5 no. 5:702-703 S-O '60. (MIRA 14:4)

1. Institut fiziki AN USSR.
(Neutrons--Scattering) (Nuclei, Atomic)

22122
S/056/61/040/003/002/031
B111/B202

24.6600

AUTHORS: Strizhak, V.I., Bobyr', V.V., Groma, L.Ya.

TITLE: Angular distribution of elastically scattered 14.5-Mev neutrons

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40, no. 3, 1961, 725 - 728

TEXT: The authors study the differential elastic cross sections of 14.5-Mev neutrons in Ag, Hg, and Bi. The neutrons were obtained from the reaction T (d,n) α , scattered from spherical scatterers, and recorded in coincidence with the alpha particles with the aid of a pulse-height time selector with a resolving time of $5 \cdot 10^{-9}$ sec. The authors aimed at comparing the results of measurements with the optical nuclear model. For this purpose the method of electronic collimation of neutrons was used. Fig. 1 schematically shows the experimental arrangement. The method of collimation is based on the correlation of the neutrons with the accompanying alpha particles and can be realized with the aid of a pulse-height time selector.

Card 1/8

Angular distribution of ...

A scintillation counter (stilbene, crystal diameter: 3.5 cm, height: 2.4 cm) with an ФЭУ -33 (FEU-33) photomultiplier was used as neutron detectors. The collimation curve was obtained by measuring the neutron flux when rotating the neutron detector around the target. The half-width of the collimated neutron-beam is 9°. Fig. 3 shows the block diagram of the pulse-height time selector. The heights of the pulses from the anodes of the photomultiplier were limited by means of 6Ж5П (6Zh5P) pentodes, their duration was limited by means of a short-circuited part of a coaxial cable; to select the coincidences, the pulses were then fed into the diode. In this selector a triple coincidence circuit with a resolution of $5 \cdot 10^{-7}$ sec was used. A slow coincidence circuit permitted the exclusion of inelastically scattered neutrons, gamma rays, and the background of the photomultiplier.

$$\sigma_{el}(\vartheta) = S(\vartheta)\left[R_1 R_2/(R_1 + R_2)\right]^2 \times \\ \times \exp\{n\sigma_{in} d\}\left[NB(E_n)\eta\right]^{-1} \qquad (2)$$

is obtained for the differential scattering cross section. R_1 - distance source - scatterer, R_2 - distance scatterer - detector, n - number of nu-

Card 2/8 3

Angular distribution of ...

clei/cm^3 in the scatterer; σ_{in} - scattering cross section for inelastic collisions; d - thickness of the scatterer; N - number of scattering nuclei; $B(E_n)$ - factor which takes account of the energy sensitivity of the detector; η - factor which takes account of the configuration of the collimated neutron beam. Fig. 4 gives the experimental data and the theoretical curves. The angles are given in the laboratory system. The statistical errors lie between 4 % at scattering angles below 50°, and 7 - 8 % at large angles. The agreement between measured and calculated angles is sufficiently good. There are 4 figures and 12 references: 3 Soviet-bloc and 9 non-Soviet-bloc.

ASSOCIATION: Institut fiziki Akademii nauk Ukrainskoy SSR (Institute of Physics, Academy of Sciences Ukrainskaya SSR)

SUBMITTED: August 24, 1960

Card 3/8— 3

BOBYR', V.V.; GRONA, L.Ya.; STRIZHAK, V.I.

Angular distribution of neutrons with an initial energy of 14 mev. inelastically scattered on carbon, nitrogen and sulfur. Zhur. eksp.i teor.fiz. 41 no.1:24-25 Jl '61. (MIRA 14:7)

1. Institut fiziki AN Ukrainskoy SSR.
(Neutrons--Scattering) (Scintillation spectrometry)

BOBYR' V.V.; GRONA, L.Ya.; STRIZHAK, V.I.

Scattering of 14 Mev. neutrons by magnesium. Izv.vys.ucheb.zav.;fiz. no.2:111-113 '63. (MIRA 16:5)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G. Shevchenko.
(Neutrons—Scattering) (Magnesium)

BOBYR', Z.

Accidents

Castastrophies caused by "business"
Tekh. mol. no. 3, March 1952

BOBYR', Z.

Ancient Chinese seismograph. Tekh.mol.22 no.2:37 F '54.
(MLRA 7:2)
(Seismometers)

BOBYR', Z.

BOBYR', Z.

Institute of Methanian furniture. Tekh.mol. 22 no.6:37-38 Je '54.
(United States--Science) (Science--United States) (MLRA 7:6)

MISHEL', E.; BOBYR' Z, [Translator]

Our cosmic neighbors. IUn.tekh. 3 no.9:19-23 S '58. (MIRA 11:10)
(Stars)

MISHEL' E. [Michel, E.]; BOBYR', Z. [Translator]

Plants-alchemists. IUn.tekh. 4 no.11:66-67 N '59.
(MIRA 13:4)

(Chemical elements) (Botanical chemistry)

BOBYR', Z.

Homemade glass. IUn.tekh. 4 no.12:70-71 D '59.
(MIRA 13:4)

(Glass)

PISHON, Yan Le [le Pichon, Jan]; BOBYR', Z. [translator]

Life in eternal darkness. Nauka i zhizn' 29 no.3:54-55 Mr '62.
(MIRA 15:7)

(Cave fauna)

PTAK, Ch.; BOBYR', Z. [translator]

Report of Herodotus was right, they needed a tamarisk plate. Nauka i zhizn' 29 no.3:58-59 Mr '62. (MIRA 15:7)
(Navagation, Primitive)

BOBYR', Zinaida

Captured planet. Nauka i zhizn' 29 no.12:87-92 D '62. (MIRA 16:3)
(Earth--Curiosa and miscellany)

BOBYR'-BUKHANOVSKIY, I. L., CAND TECH SCI, "TECHNICAL POSSIBILITIES OF A SHIP board RADAR STATION AS A MEANS OF PREVENTING COLLISIONS OF SHIPS AT SEA." LENINGRAD, 1961. (LENINGRAD HIGHER ENGINEERING ~~MARINE~~ Maritime SCHOOL IM ADMIRAL S. O. MAKAROV). (KL, 3-61, 213).

YASKEVICH, Aleksey Pavlovich; BOBYR', I.L., red.; FEDOROV, V.P., red.izd-va; LAVRENOVA, N.B., tekhn.red.

[Collisions of ships] Stolknovenie sudov. Moskva, Izd-vo "Morskoi transport," 1958. 137 p. (MIRA 12:1)
(Collisions at sea)

BOBYRENKO, Yu.Ya.; DOLMATOV, Yu.D.; Prinimali uchastiye: ZAV'YALOVA, V.I.; MOISENKOVA, V.D.; KONOVALOV, V.K.

Rapid method of determining the dispersion composition of titanium dioxide pigments. Lakokras.mat.i ikh prim. no.6:52-53 '62. (MIRA 16:1)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.
(Pigments--Testing) (Titanium oxides)

DOLMATOV, Yu.D.; BOBYRENKO, Yu.Ya.

Methods of dispersion analysis of inorganic pigments. Lakokras. mat. i ikh prim. no.3:54-57 '63. (MIRA 16:9)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.
(Pigments) (Particle size determination)

BOBYRENKO, Yu.Ya.

Effect of the index of refraction and size of the particles of pigments on their covering power. Lakokras. mat. i ikh prim. no.4:51-52 '63. (MIRA 16:10)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.

KLESHCHEV, G.V.; SHEYNKMAN, A.I.; BOBYRENKO, Yu.Ya.; Prinimal uchastiye TITOV, G.K.

Effect of metal oxides on the polymorphic transformation of anatase to rutile. Lakokras.mat. i ikh prim. no.2:21-23 '64.
(MIRA 17:4)

BOBYRENKO, Yu.Ya.

Instrument for determining the density of disperse materials.
Zav. lab. 31 no.2:243-244 '65. (MIRA 18:7)

1. Chelyabinskiy filial Gosudarstvennogo instituta mineral'nykh pigmentov.

LIMAR', T.F.; UVAROVA, K.A.; BULACHEVA, A.F.; SGYVUBM, A.S.; BEDNOVA, I.N.; MAKOVSKAYA, E.B.; SOLOMEINA, G.I.; DOLMATOV, Yu.D.; BOBYRENKO, Yu. Ya.; KOGAN, F.I.; KOVALENKO, P.N.; IVANOVA, Z.I.; FOKIN, A.V.; KOMAROV, V.A.; SOROCHKIN, I.N.; DAVYDOVA, S.M.; RAVDEL', A.A.; GORELIK, G.N.; DAUKSHAS, V.K. [Dauksas, V.]; PIKUNAYTE, L.A. [Pikunaite, L.]; SHARIPOV, A.Kh.; SHABALIN, I.I.; STEPNOVA, G.M.; SHMIDT, Ye.V.; DUBOV, S.S.; STRUKOV, O.G.

Scientific research papers of the members of the All-Union Mendeleev Chemical Society (brief information). Zhur. VHKO 10 no.3:350-360 '65. (MIRA 18:8)

1. Donetskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv (for Limar', Uravova, Bulacheva). 2. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut (for Shubin, Bednova, Makovskaya, Solomeina). 3. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta mineral'nykh pigmentov (Dolmatov, Bobyrenko). 4. Rostovskiy-na-Donu universitet (for Kogan, Kovalenko, Ivanova). 5. Leningradskiy tekhnologicheskiy institut imeni Lensoveta i Institut mineral'nykh pigmentov (for Ravdel', Gorelik). 6. Vil'nyusskiy gosudarstvennyy universitet imeni Kpsukasa (for Daukshas, Pikunayte). Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv (for Sharipov, Shabalin). 8. Tomskiy politekhnicheskiy institut imeni Kirova (for Stepnova, Shmidt).

BOBYREV, A.S.

Making excentric disks for automatic soap-wrapping machines.
Masl.-zhir.prom. 20 no.3:30 '55. (MLRA 8:7)

1. Kuybyshevskiy kombinat Glavparfyumera.
(Wrapping machines)

30092
S/057/61/031/011/007/019
B104/B108

X6-Y311

AUTHORS: Bobyrev, N. A., and Fedyanin, O. I.

TITLE: Localization of spark-over in a power discharge by a transverse magnetic field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 11, 1961, 1309 - 1316

TEXT: The localization of the initial state of an electrodeless ring discharge in a transverse magnetic field was experimentally investigated. The experiments were carried out with a device shown in Figs. 1 and 3. The glass vacuum chamber consists of two coaxial cylinders 5 and 6 and two covers 1. The chamber is evacuated down to $5 \cdot 10^{-6}$ - 10^{-5} mm Hg and then filled with hydrogen (10^{-2} - 10^{-1} mm Hg). A three-turn solenoid (300 mm high, 100 mm in diameter) is installed into cylinder 5. The transverse magnetic field is generated by a system of coils located on the covers. During the experiment the capacitor battery C_2 = 150 μf (Fig. 3) is discharged through the coils generating the transverse field. When the field strength reaches its maximum, the capacitor battery C_1 = 12 μf is

X

Card 1/63

Localization of spark-over in a ...

discharged through the solenoid generating an eddy electric field. The electric field strength on the inner wall of the vacuum chamber is 45 v/cm if the capacitors are charged up to 10 kv. From experimental measurements of the gas stream and the current in the solenoid the authors determined the current-density distribution in the chamber (Fig. 5). Obviously, the discharge develops far from the walls of the vacuum chamber, and the current ring moves outward. In the absence of a magnetic field the discharge is ignited on the inner wall of the discharge chamber. The radius and the time of spark-over were determined as functions of the initial conditions. Results are shown in Fig. 7. The authors thank I. S. Shpigel' for discussions, and also A. P. Mal'tsev and Yu. S. Antonov for assisting in experiments. There are 7 figures and 6 references: 4 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: Goswami. Indian J. Phys., 32, no. 1, 35 - 41, 1958; Goswami. Indian J. Phys., 32, no. 5, 241 - 248, 1958.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Moskva (Physics Institute imeni P. N. Lebedev, Moscow)

SUBMITTED: January 9, 1961

Card 2/6

Localization of spark-over in a ...

Fig. 1. Vacuum chamber. Legend: (1) cover; (2) and (4) Rogovskiy rings; (5) and (6) glass cylinders; (A) to the pump. Dimensions given in mm.
Fig. 3. Electric layout. Legend: (A) starting circuit.
Fig. 5. Current-density distribution in the chamber at various instants. Legend: (a) E = 90 v/cm; p = $1.5 \cdot 10^{-2}$ mm Hg; H = 115 oe; (b) E = 90 v/cm; p = $8.4 \cdot 10^{-2}$ mm Hg; H = 0; τ_0 = 0.25 μsec.
Fig. 7. Place and time of breakdown as functions of pressure, electric field strength and transverse magnetic field. Legend: (α) and (α') E = 90 v/cm; (δ) and (δ') E = 72 v/cm; (β) E = 54 v/cm; (1) $H_\perp$ = 115 oe; (2) $H_\perp$ = 85 oe; (3) $H_\perp$ = 57 oe.

Card 3/3

30093
S/057/61/031/011/008/019
B104/B108

26.4311

AUTHORS: Robyrev, N. A., and Fedyanin, O. I.

TITLE: Investigation of the initial state of an electrodeless power discharge

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 11, 1961, 1317 - 1323

TEXT: The initial states of an electrodeless power discharge in hydrogen at $E/p > 100$ were investigated. E is the electric-field strength in v/cm, and p is the pressure in mm Hg. The experimental device is shown in Figs. 1 and 2. During operation of this device the capacitor bank was charged to voltages of 10 - 30 kv. The field strength of the eddy electric field on the inner wall of the vacuum chamber was 45 - 135 v/cm. Current oscillograms showed that the current ($j \gg 100$ a/cm^2) in the gas does not arise simultaneously over the whole chamber cross section. To clarify this circumstance, the moment of spark-over at different points of the chamber was determined. Measurements were made with movable ring probes. Results show that spark-over occurs simultaneously over the entire chamber volume. The development of the discharge after spark-over was studied by

Card 1/2

plotting discharge current density distribution curves on the basis of current oscillograms (Fig. 4). The propagation of the plasma front (concentration $n = 10^{12}$ el/cm^3) is shown in Fig. 7. It is concluded that the observations of physical effects during the development of a strong induction discharge agree with theoretical presentations of S. I. Braginskiy and G. I. Budker (Fizika plazmy i problema upravlyayemykh termoyadernykh reaktsiy, v. 1, p. 186, 1958). At first, spark-over and ionization are more or less homogeneous throughout the volume. Then, a skin effect develops due to the variable plasma conductivity. With further increase of current the intrinsic magnetic field assumes the dominant role. The authors thank Professor M. S. Rabinovich and I. S. Shpigel' for discussions, and Yu. S. Antonov for assisting in the experiments. There are 7 figures and 8 Soviet references.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Moskva (Physics Institute imeni P. N. Lebedev, Moscow)

SUBMITTED: January 31, 1961

Card 2/2

X

S/057/62/032/007/005/013
B104/B102

24.2120

AUTHORS: Bobyrev, N. A., and Fedyanin, O. I.

TITLE: Effect of an external longitudinal magnetic field on the dynamic stabilization of a cylindrical gas conductor

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 7, 1962, 823-826

TEXT: The dynamic stabilization of a plasma filament in the presence of an external longitudinal magnetic field is studied. The contribution of the transverse field to the pressure balance is neglected. ($H_\sim^2 / (H_{\varphi e}^2 + H_{ze}^2) \ll 1$) The conductivity of the plasma is assumed to be infinite, and the disturbances are assumed to be small as compared with the radius r_0 of the cylinder. These assumptions permit the use of expressions derived by N. V. MacLachlan (Theory and Application of Mathieu Functions, IL, M., 1953) for the forces acting on a deformed conductor. The stability of the principal deformation types (necking-in and bending) is studied. There are 5 figures.

Card 1/2

Effect of an external longitudinal ...

S/057/62/032/007/005/013
B104/B102

SUBMITTED: August 4, 1961

Card 2/2

BOBYREV, N.A.; FEDYANIN, O.I.

Stabilization of a current-carrying cylinder by means of a high-frequency magnetic field. Zhur. tekh. fiz. 33 no.10: 1187-1192 O '63. (MIRA 16:11)

BOBYREV, O.N., inzhener.

Using a dragline to smooth slopes. Transp. stroi. 6 no.2:29 F '56.
(Earthwork) (MLRA 9:6)

L 25489-66 EWP(m)/EPF(n)-2/EWT(l)/ETC(f)/EWG(m)/T-2 LIP(c) AT

ACC NR: AP6011385 SOURCE CODE: UR/0057/66/036/003/0427/0437

AUTHOR: Bobyrev, N.A. (Deceased)

ORG: Physics Institute im. P.N.Lebedev, Moscow (Fizicheskiy institut)

TITLE: Dynamic stabilization of a current carrying plasma cylinder

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 3, 1966, 427-437

TOPIC TAGS: plasma stability, discharge plasma, high frequency discharge, longitudinal magnetic field, plasma oscillation, magnetohydrodynamics

ABSTRACT: The author has employed the apparatus and experimental techniques described in his preceeding paper (ZhTF, 36, 417, 1966 / see Abstract AP6011384/) to investigate the effect of the presence of high frequency fields on the magnetohydrodynamic instabilities of a current carrying plasma filament. In the present experiments the high frequency field was provided by the current in the plasma filament, which was produced by high frequency excitation of gas at pressures of the order of 10^{-3} mm Hg (see the reference cited above for further details). At high longitudinal magnetic field intensities, when hydrodynamic instability would not be expected even in the absence of high frequency fields, there were observed violent fluctuations of the magnetic field due to the current in the plasma filament. The fluctuations at different distances from the axis were not correlated, and these fluctuations were

Card 1/2 UDC: 533.9

L 25489-66
ACC NR: AP6011385

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therefore not due to hydrodynamic instability. The frequencies of these fluctuations were in the range to be expected for drift oscillations of a nonuniform plasma, and the fluctuations are tentatively ascribed to drift oscillations although it was not possible to suppress them with the aid of a multipole magnetic field produced by six conductors parallel to the axis of the discharge tube. In weak longitudinal magnetic fields there were observed regular fluctuations in the azimuthal component of the field, the frequency of which decreased linearly with increasing longitudinal magnetic field strength and became equal to zero when the longitudinal magnetic field rose to four times the azimuthal field at the boundary of the plasma filament. These fluctuations were correlated, and they are ascribed to hydrodynamic oscillations of the plasma filament. Experiments were also performed with direct current plasma filaments. Magnetohydrodynamic oscillations of the plasma filament were observed in this case also, and they were stabilized when the ratio of the longitudinal magnetic field to the azimuthal field at the boundary of the filament was 13 or greater. It is concluded that the presence of a high frequency field aids considerably in the stabilization of magnetohydrodynamic oscillations of a current carrying plasma filament. The longitudinal magnetic field strengths required for stabilization were considerably higher than predicted by current theories, both in the case of the high frequency plasma currents and in the direct current case. This discrepancy is ascribed to inadequacy of the theory. The author thanks M.S.Rabinovich, A.A.Rukhadze, and I.S.Danilkin for valuable discussions and V.A.Samokhvalov for assistance with the experiments. Orig. art. has 7 formulas, 10 figures and 1 table.

SUB CODE: 20 SUBM DATE: 19Jun65 ORIG. REF: 010 OTH REF: 001

Card 2/2 CC

L 25491-66 EWT(1)
ACC NR: AP6011384 SOURCE CODE: UR/0057/66/036/003/0417/0426

AUTHOR: Bobyrev,N.A. (Deceased)

ORG: Physics Institute im. P.N.Lebedev, Moscow (Fizicheskiy institut)

TITLE: Localization of a linear high frequency discharge

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 3, 1966, 417-426

TOPIC TAGS: plasma confinement, discharge plasma, high frequency discharge, plasma stability, longitudinal magnetic field, helium, hydrogen, air, argon, krypton

ABSTRACT: The author has investigated the possibility of employing diaphragms and a longitudinal magnetic field for the lateral confinement of high frequency discharges in helium, hydrogen, air, argon, and krypton at pressures from 10^{-1} to 10^{-2} mm Hg. Such confinement, if successful, would provide an experimental technique for investigating the dynamic stabilization with the aid of high frequency fields of a current carrying plasma filament. The discharges were produced in a 43 cm long 7.2 cm diameter glass tube by longitudinal high frequency electric fields up to 250 V/cm induced by six toroidal windings of ten turns each, excited at from 0.75 to 3.0 MHz by a 2.5 MW pulsed oscillator. A longitudinal magnetic field of up to 6 kOe was produced by a current pulse in a suitable winding. The magnetic field reached its maximum intensity within 100 μ sec and thereafter decayed with a time constant of 500 μsec; it was approximately constant during the discharge. The discharge was

Card 1/3 UDC:537.523.7

initiated by a plasma burst from a small coaxial plasma gun at one end of the discharge tube and was maintained for 120 to 180 μsec by the high frequency field. The maximum high frequency current in the gas was 6 kA. The wall of the discharge tube was so constricted at two places 15 cm apart as locally to reduce the diameter of the tube to 3.5 cm, thus forming the diaphragms to confine the discharge. The radial distributions in the region between the constrictions of the ionization and the azimuthal component of the magnetic field (due to the current in the plasma) were measured during the discharge by means of movable probes. It was found that when the longitudinal magnetic field exceeded a certain critical intensity, which increased with increasing excitation frequency, both the ionization and the current were almost entirely confined to the 3.5 cm diameter region defined by the constrictions for the full duration of the discharge, except when there was resonance between the ion Larmor frequency and the frequency of the exciting oscillator. In the latter case both the ionization and the current rapidly filled the full 7.2 cm diameter of the discharge tube. Experiments were also made with direct current discharges. These were initiated by a 75 μsec high frequency discharge and were maintained for some 400 μsec, the strength of the direct current in the plasma being about 2 kA. These discharges were also confined to the region defined by the constrictions when the longitudinal magnetic field was sufficiently strong. A magnetic field of 450 Oe was adequate to confine a dc discharge in argon at 3.5×10^{-4} mm Hg. It is concluded that a linear high frequency discharge can be laterally confined by means of diaphragms

L 25491-66

ACC NR: AP6011384

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and a longitudinal magnetic field. The possibility of such confinement is ascribed to the low transverse conductivity of the plasma in the magnetic field. The failure of the plasma to remain confined under cyclotron resonance conditions is ascribed to the anomalous diffusion noted under these conditions by V.V.Chechkin, M.P.Vasil'yev, B.I.Grigor'yeva, and B.I.Smerov (Yadernyy sintez, 4, 145, 1964). The author thanks M.S.Rabinovich and A.A.Rukhadze for fruitful discussions and I.M.Rayevskiy and V.A. Samokhvalov for assistance with the experiments. Orig. art. has: 5 formulas, 10 figures, and 1 table.

SUB CODE: 20 SUBM DATE: 10Jun65 ORIG. REF: 013 OTH REF: 002

Card 3/3 CC

S/139/62/000/003/018/021
E193/E383

AUTHORS: Panin, V.Ye., Fadin, V.P., Bobyreva, G.A.

TITLE: The effect of purity of the alloy on the character of ordering in solid Cu-Al solutions. I

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 3, 1962, 153 - 159

TEXT: It has been established in the course of several earlier investigations that the disorder-order transformation in Cu-Al alloys can be considerably affected by the degree of purity of the alloy. Since they were indications that P was one of the impurities responsible for the different behaviour of various specimens, the investigation described in the present paper was undertaken to study the effect of trace quantities of this element on the ordering transformation in the alloy under consideration. The experimental materials comprised a high-purity vacuum-melted alloy containing 14.3 at.% Al and two commercial-grade alloys containing 14.9 at.% Al and 0.025 or 0.7 wt.% P. Various test pieces were heated in vacuum at temperatures ranging from 100 - 800 °C and then cooled in air or

water-quenched, after which they were aged isothermally at various temperatures or heated slowly through the disorder-order transformation range, the progress of the ordering transformation being studied by measuring the electrical resistivity and determining the temperature-dependence of both the electrical resistivity and specific heat of the test pieces. The activation energy of the process studied was also determined. Several conclusions were reached.

1) The disorder-order transformation temperature range is greatly affected by the degree of purity of the alloy and is shifted towards a higher temperature with increasing impurity content. Thus, for instance, the temperature corresponding to the maximum intensity of ordering in specimens containing 0.025 and 0.07% P, quenched from 500 °C and heated at a rate of 0.6 °C/min, was 137 and 227 °C, respectively.

2) With increasing P content, the activation energy for ordering in Cu-Al alloys increases, amounting to approximately 17 kcal/mole for the pure (P-free) material and 26 and 35 kcal/mole for specimens containing 0.025 and 0.07% P, respectively.

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E193/E383

The effect of purity ....

3. If sufficiently high (greater than 400 °C) quenching temperatures are employed, the activation energy for ordering is independent of the quenching temperature and depends only on the degree of purity of the alloy. Under these conditions, the activation energy for ordering is determined by the activation energy for the movement of vacancies in the alloy of a given composition.

4) The concentration of excess vacancies in alloys quenched from relatively low temperatures is low and under these conditions the thermal equilibrium vacancies begin to play a significant part in the ordering process; at the same time, the activation energy for ordering increases.

5) By adding trace quantities of P to Cu-Al alloys, it is possible to decrease the atomic mobility of these alloys which, as a result, can retain their disordered structure under conditions in which ordering would take place in high-purity material.

Card 3/4

The effect of purity ....

S/139/62/000/003/018/021
E193/E383

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V. Kuybysheva (Siberian Physicotechnical Institute of Tomsk State University imeni V.V. Kuybyshev)

SUBMITTED: November 30, 1961

Card 4/4

ROZOVA, Z.A.; CHERNENKOVA, N.A.; REZNIKOVA, O.Yu.; BOBYREVA, N.D.; KIREYEVA, O.K.

Preventive effectiveness of dry diving vaccine against brucellosis developed by the Institute of Experimental Medicine of the Academy of Medical Sciences of the U.S.S.R. Zhur. mikrobiol. epid. i immun. no.11:62-66 N '54. (MLRA 8:1)

1. Iz Rostovskoy oblastnoy protivobrutsellesnoy stantsii (glavnyy vrach Z.A.Rozova, nauchnyy rukovoditel' kandidat meditsinskikh nauk G.A.Balandin)

(BRUCELLOSIS, prevention and control, vacc., dry living vaccine)
(VACCINES AND VACCINATION, brucellosis vacc., dry living vaccine)

BOBYREVA, N.D.

ROZOVA, Z.A.; CHERNENKOVA, N.A.; REZNIKOVA, O.Yu.; BOBYREVA, N.D.; KIREYEVA, O.K.

Epidemiologic effectiveness of prophylaxis with dry living vaccine from the Institute of Epidemiology and Microbiology of the Academy of Medicine of the U.S.S.R. Zhur.mikrobiol. epid. i immun. 27 no. 10:79-82 O '56. (MLRA 9:11)

1. Iz Rostovskoy oblastnoy protivobrutsellezmoy stantsii.
(BRUCELLOSIS, prevention and control, in Russia, vacc. (Rus))

BOBYREVA, O.; MANZHOSOV, V.

Two letters. Za bezop. dvizh. 6 no.10:13 O '63.
(MIRA 16:11)

1. Inspektor 14-go otdeleniya Otdela regulirovaniya ulichnogo dvizheniya i Gosudarstvennoy avtomobil'noy inspektsii po g. Moskve (for Manzhosov).

I.

USSR/Plant Physiology - General

Abs Jour : Ref Zhur - Biol., No 21, 1958, 95603

Author : Babyreva, T.V.
Inst : -
Title : Influence of Phosphoroorganic Preparations (Octamethyl and Mercaptophosphate) on Some Physiological Processes of the Cotton Plant.

Orig Pub : UzSSR Fanlar Akad. akhboroti. Biol. fanlari ser. Izv. An UzSSR. Ser. biol. n., 1957, No 3, 39-44

Abstract : Sprinkling of cotton plants (in the three leaves stage) with solutions of octamethyl and mercaptophosphate applied for intoxication, against haustella predators, led in 48 hours to a decrease in intensity of photosynthesis at a concentration of 0.4-0.6%; at a concentration of 0.2%, the intensity of photosynthesis did not change. Respiration of plants was strengthened by the effect of octamethyl in concetrations of 0.4-0.6%, mercaptophosphate did

Card 1/2

BOBYREVA, T.V.

Intoxication of cotton with organophosphorus insecticides in relation to its water-supply. Vop.biol.i kraev.Med. no.3:178-181 '62. (MIRA 16:3)

(PLANTS, EFFECT OF INSECTICIDES ON)
(COTTON—DISEASES AND PESTS)

BOBYREVA, T.V.

Effect of phosphorus organic insecticides on the respiration rate of the cotton plant. Fiziol. rast. 9 no.6:738-740 '62. (MIRA 15:12)

1. Institute of Zoology and Parasitology of Uzbek S.S.R. Academy of Sciences, Tashkent.
(Plants—Respiration)
(Mercaptophos)

BOBYREVA, T.V.

Carbohydrate metabolism in cotton in nonroot intoxication by methyl mercaptophos amd mercaptophos. Vop. biol. i kraev. med. no.4:247-251 '63. (MIRA 17:2)

STROGANOVA, Ye.A., inzh.; BORYRYA, B.A., inzh., red.; MAR'YANSKIY, L.P., red. izd-va.; LARIONOV, G.Ye., tekhn. red.

[Destruction of shore protection installations in Netherlands and Great Britain as a result of a storm in 1953] Razrushenie beregozashchitnykh sooruzhenii Gollandii i Anglii shtormom 1953 g. Moskva, Gos. energ. izd-vo, 1958. 23 p. (MIRA 11:11)

1. Moscow. Vsesoyuznyy proyektno-izyskatel'skiy i nauchno-issledovatel'skiy institut "Gidroproyekt" imeni S.Ya. Zhuk.
(Great Britain--Shore protection)
(Netherlands--Shore protection)

BORISHEV, A. (Kegen'skiy rayon, Alma-Atinskaya oblast')

Strong character. Zemledelie 27 no.5:19-21 My '65.

(MIRA 18:6)

BOBRYSHEV, A.T.

Finding underground waters for large water intakes. Razved. i okh. nedr 30 no.12:41-44 D '64. (MIRA 18:4)

1. Geologicheskoye upravleniye TSentral'nykh rayonov.

BOBYSHEV, B.A.; RODKIN, V.D.

Using heat-resistant materials in instrument manufacture. Av.prom. 26 no.8:66-68 Ag '57. (MIRA 15:4)
(Instrument manufacture)

BOGDANOV, V.M., zasl. izobretatel' RSFSR; BOBYSHEV, B.A., inzh., retsenzent; SVERDLOV, M.I., kand. tekhn. nauk, red.; VARKOVETSKAYA, A.I., red.izd-va; PETERSON, M.M., tekhn. red.; BARDINA, A.A., tekhn. red.

[Sectional die-stamping of parts in short-scale production] Shtampovka detalei po elementam v melkoseriinom proizvodstve. Izd.2., perer. i dop. Moskva, Mashgiz, 1963. 186 p. (MIRA 16:8)

(Sheetmetal work)

BOBRYSHEV, G.I.

New method of processing petroleum layers for hydraulic fracturing. Neft. khoz. 39 no.3:43-46 Mr '61.
(MIRA 16:7)

(Oil wells—Hydraulic fracturing)

ZUR-50 C

L 05116-67 EWT(1) BO

ACC NR: AP6030240 (AN) SOURCE CODE: UR/0394/66/004/007/0030/0031

AUTHOR: Bobyshev, V. G.; Lapchenko, G. Ya. 17B

ORG: Don Agricultural Institute (Donskiy sel'skokhozyaystvennyy institut)

TITLE: Influence of herbicides on the microflora of the soil

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 7, 1966, 30-31

TOPIC TAGS: herbicide, soil, microflora, corn, millet

ABSTRACT: In 1963—1964, experiments were made in Rostov Oblast to determine the effect of herbicides on the microflora of soils sown with millet and corn. It was found that simazine, atrazine and 2,4-D amino salts are favorable for the development of microorganisms, particularly those of nitrogen fixing bacteria. Table 1 presents data on the number of bacteria and of nitrogen fixing bacteria, considered separately, in soils sown with millet. Table 2 shows the influence exerted by herbicides on the microorganisms existing in a 0—10 cm layer of soil sown with corn. No adverse effect of herbicides on microflora was found. Orig. art. has: 2 tables. [W.A. 50]

SUB CODE: 02, 06, 07/ SUBM DATE: 29Jun65/ ORIG REF: 006/ OTH REF: 002

Card 1/3 UDC: 632.954.576.8

L. 05116-67

ACC NR: AP6030240

Table 1. Influence of herbicides on number of bacteria growing on beef extract agar on millet crops (in thousand per ha of absolutely dry soil)

Variants of experiment	No. of bacteria in the layer of soil in the heading phase of the millet		No. of bacteria in the layer of soil prior to reaping		No. of azotobacter in the layer of soil in the heading phase of the millet		No. of azotobacter in the layer of soil before reaping	
	0—10 cm	10—20 cm	0—10 cm	10—20 cm	0—10 cm	10—20 cm	0—10 cm	10—20 cm
Control (without weeding)	2190, 1730	1630/1680	4300, 4180	3300, 3300	0.43, 0.83	0.73/0.96	0.57, 0.123	0.103, 0.01
Simazine inserted in soil, in kg/ha (a. w.)								
3	1520/1820	1720/1800	4500, 4170	3100, 3400	0.46/0.101	0.96/0.112	0.51/0.115	0.116/0.113
4	1620/1430	1980/1740	4400/3930	2700/3250	0.42/0.107	0.102/0.96	0.63/0.171	0.123/0.203
Atrazine inserted in soil, in kg/ha (a. w.)								
3	1980/1900	2200/1630	4100/4600	3400/4900	0.51/0.97	0.94/0.116	0.71/0.198	0.126/0.132
4	1840/1760	1610/1650	4800/4700	4300/5600	0.43/0.106	0.97/0.109	0.67/0.109	0.119/0.121
2,4-DA used on the sprouts, in 0.7 kg/ha (a. w.)	2060/1530	1830/1730	4200/3650	3000/5800	0.54/0.98	0.106/0.107	0.64/0.137	0.131/0.149

Remarks: In the numerator: 1963 data;
In the denominator: 1964 data.

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L 05116-67
ACC NR: AP6030240

Table 2. Influence of herbicides on the number of microorganisms on corn crops in a 0—10 cm layer of soil (in thousand per ha of absolutely dry soil)

Variants of experiment	No. of soil microorganisms in heading phase			No. of soil microorganisms in milk-wax stage of ripeness		
	Total	Oligonitrophyls	Clostridium	Actinomycetes	Oligonitrophyls	Clostridium
Control (without weeding)	1610	101	10^4	5960	183	10^4
Insertion of soil after corn sowing:						
simazine, 3 kg/ha	1820	78	10^4	3480	95	10^4
chlorazine, 3 kg/ha	1483	92	10^4	3240	70	10^4
Used on sprouts:						
2,4-DA, 0.9 kg/ha	1408	85	10^4	3720	72	10^4
crotilin, 0.7 kg/ha	1407	103	10^4	3680	59	10^4
celatox, 0.7 kg/ha	930	109	10^4	3220	87	10^4
ranketex, 3 kg/ha	1486	73	10^4	3520	52	10^4

Remark: The total number of microorganisms and the number of oligonitrophyls were calculated on Ashby agar. The number of clostridium bacteria was calculated on the Vinogradskiy medium.

Card 3/3 vmb

BOBYSHEV, V.N., inzh.; MERENTSEV, S.P., inzh.

Standardization of brake compressors for railroad rolling stock. Mashinostroenie no.5:85-86 S-O '64 (MIRA 18:2)

18(5)

SOV/128-59-9-4/25

AUTHOR: Smirnov A.A. and Bobysheva I.V., Engineers

TITLE: Two-layer Shell Moulds for Iron Castings

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 9, pp 14-15 (USSR)

ABSTRACT: Application of processes which enable manufacturing of castings with highly precise and clean surface, by using shell moulds made of thermo-reactive rosins, is limited owing to the high cost of materials involved (rosins, bakelite). To meet the problem of cost reduction, the Institute VNIINMASh (VNIITMASh) worked out, in 1957-1959, a technological process of preparing two-layer moulds, where thermo-reactive rosins are combined with liquid glass and other chemically hardening materials. According to this method, the moulds are prepared of two layers - a thin one consisting of a mixture of sand and rosin (facing layer), and a thicker one made on the basis of liquid glass (consolidating layer). The requirements presented to two-layer shell moulds imply a number of physico-mechanical properties of layers entering as components in the moulds construction, such as their strength, heat-stability, gas-permeabi-

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lity, etc. The strength values of the layers containing 2 to 8% of powdered bakelite or liquid glass are given in Figure 1. A number of researchers (A.M. Lyass, L.Pekrzhela and others) have determined that the strength of mixtures with different contents of liquid glass increases with the temperature rise, attaining its climax at 500° - 600°C, while the strength of thermo-reactive rosins falls, as their temperature is increased (research of O.V. Kolacheva, B. Vaters and others). The property of gas-permeability of double-layer shell moulds secures obtaining of high-quality castings. It has been experimentally established that the thickness of sand-rosin layers should vary from 1.5 to 6 mm, while that of the mixture with liquid glass should amount to 20-50 mm, both depending on the weight of the casting to be moulded. Pertinent figures are given on Page 15. The following is the mixture composition used for the preparation of double-layer shell moulds: 1) sand-rosin layer - 94 to 95% fine quartz sand, 5-6% powdered bakelite, and 0.20 - 0.35% paraffin-oil; 2) liquid glass layer - 100% of

coarse quartz sand and 6-7% (over 100%) of liquid glass. The manufacturing cost of castings had been, with the application of two-layer shell moulds, reduced by 8-9%, as compared with their cost when common methods of production were used; the labor applied was also nearly 2 times reduced. As a result, the total cost of castings was decreased by not less than 12% of its original value. There are 1 graph, 2 tables and 3 photographs.

BOBYSHEVA, Z. I.

AUTHORS: Kuznetsov, S. G., Bobysheva, Z. I. 79-2-53/64

TITLE: The Synthesis of Some Simple Aminoalkyl Ethers With Cholinolytic Properties (Sintez nekotorykh prostykh aminoalkilovykh efirov s kholinoliticheskimi svoystvami).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 521-524 (USSR)

ABSTRACT: Presuming that the already known cholinolytic preparations of the group of the amino-alkyl esters will have compounds of similar characteristics and also cholinolytic properties some amino alkyl ethers were synthesized. After an unsuccessful experiment described here, the reaction was carried out as follows:

$$ClCH_2COOC_2H_5 + NaOCH_2CH_2N(R)_2 \rightarrow C_2H_5OCOCH_2\text{-}O\text{-}CH_2CH_2N(R)_2$$

$$\xrightarrow{2\ C_6H_5Li} (C_6H_5)_2C(OH)CH_2\text{-}O\text{-}CH_2CH_2N(R)_2;\ R = CH_3,\ C_2H_5;$$

The reaction products were purified by high vacuum distillation and recrystallized as hydrochlorides. Yield:

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Synthesis of Some Simple Aminoalkyl Ethers With Cholinolytic Properties 79-2-53/64

1,1-diphenyl-2-(β-diethyl-amino ethoxy)-ethanol-1 = 70 % and 1,1-diphenyl-2-(β-dimethyl amino ethoxy)-ethanol-1 = 56 %. On the occasion of heating the latter with monochlorethane in acetone the corresponding ehtylate chloride was obtained which is analogous to the well known quinolitic preparation "Lakhezin". On the occasion of the action of thionyl chloride on the ether mentioned first 1,1-diphenyl-2-(β-diethyl-ethoxy)-ethylene was obtained. All compounds obtained were investigated as to their pharmacological effects and it was found that all of them were much less active than the corresponding amino alkyl esters. After the termination of the present work a communication was issued by Parkes (ref. 4) in which two of the ethers synthesized in the present work were mentioned, however, a reference was made neither as to the method of production nor by whom and when the compounds were obtained. The method of preparation as well as the specific data of the compounds obtained are given.

Card 2/3

The Synthesis of Some Simple Aminoalkyl Ethers With Cholinolytic Properties 79-2-53/64

There are 4 references, 1 of which is Slavic.

ASSOCIATION: All-Union Scientific Research Institute for Sanitation Chemistry (Vsesoyuznyy nauchno-issledovatel'skiy sanitarno-khimicheskiy institut).

SUBMITTED: January 23, 1957

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Kuznetsov, S. G., Bobysheva, Z. I., Balonova, E. M. 79-28 3-15/61

TITLE: The Synthesis of the Marked Diethylamincethylester S^{35} of the Diphenyloxythioacetic Acid (Sintez mechenogo dietilaminoetilovogo S^{35}- efira difeniloksitiouksusnoy kisloty)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 635-637 (USSR)

ABSTRACT: For the investigation of the physiological effect of cholinolithic preparations the synthesis of a marked active cholinolithic compound was necessary. As such, the authors selected the diethylaminoethylester S of diphenyl-oxythioacetic acid (formula II), which, as is known, is a considerably greater antagonist of acetylcholine than diethylaminoethylester S of diphenylthioacetic acid (tiphene), the synthesis of which with the marked atom S^{35} is described in publications (Ref 2). For the comparatively easy synthesis of aminothioester with radioactive sulfur the authors used the method described in publications

Card 1/3

The Synthesis of the Marked Diethylaminoethylester S^{35} of the Diphenyloxythioacetic Acid 79-28 3-15/61

(Ref 3) (see mentioned reaction process). As radioactive raw material $BaS^{x}O_4$ was used which contains the sulfur isotope S^{35}. According to known examples (Ref 4) the $BaS^{x}O_4$ was reduced at 900-1000° in BaS^{x} by hydrogen. BaS^{x} converted to thiourea on the action of cyanamide and bicarbonate of ammonium (see reaction process). The yield in thiourea (NH_2-CS-NH_2) was computed on the basis of $BaS^{x}O_4$, about 95 %. The synthesis of the necessary diethylaminoethanethiol was realized by the reaction of thioureas with diethyl-β-chloroethylamine and by the subsequent alkaline hydrolysis of the obtained β-diethylaminoethylisothiourea (see reaction process), The yield of diethylaminoethanethiol, computed on the basis of thiourea, was 70 %. The reaction of aminomercaptane to the final product - aminothioester-took place in two steps according to the mentioned scheme 1. The intermediate product, the diethylaminoethylester S of diphenylchlorothioacetic acid (I) precipitated as hydrochloride in crystalline state. The desired final product the diethyl-

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The Synthesis of the Marked Diethylaminoethylester S^{35} of the Diphenyloxythioacetic Acid 79-28-3-15/61

aminoethylester S^{35} of diphenyloxythioacetic acid (II) was converted to hydrochloride, passing through the free base. The yield of this final product, when using small amounts of (1,5-2 g) $BaS^{x}O_4$, was 20-22 %, computed on the basis of the radioactive raw material. The yield could be increased to 52 % with 8-10 g $BaS^{x}O_4$. The synthesis proceeded in a simple apparatus and within shortest time. There are 1 figure, and 5 references, 3 of which are Soviet

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy sanitarno-khimicheskiy institut (All-Union Scientific Research Institute for Sanitation Chemistry)

SUBMITTED: January 23, 1957

Card 3/3

KUZNETSOV, S.G. (Leningrad); BOBYSHEVA, Z.I. (Leningrad)

Optical isomers of some cholinergic substances. Zhur.ob.khim. 32 no.11:3779-3783 N '62. (MIRA 15:11)
(Parasympathominetic substances)
(Isomers)

BOBYSHOV, Mikhail Pavlovich

BOBYSHOV, Mikhail Pavlovich.....Moskva v dni pobed. Moskva, Iskusstvo, 1946.
16 col. plates (in portfolio)
CLU DLC: DK601.B6

SO: LC, Soviet Geography, Part II, 1951/Unclassified

POP, Gr.; COLEV, E.; BOC, I.

Direct synthesis of nitriles through the catalytic ammonolysis of the methylic groups of some aromatic and olefinic hydrocarbons in the absence of oxygen. Studii chim Timisoara 8 no.1/2:151-159 Ja-Je '61.

(Nitriles) (Ammonolysis) (Oxygen) (Methyl group)
(Aromatic compounds) (Olefins) (Hydrocarbons)

RADULESCU, Gheorghe; BOCA, Adam

Powerful impulse toward new successes. Constr Buc 16 no. 755:1 27 June '64.

1. Head of the Brigade at the Marasesti Construction Site, I.C.M. no. 3, Bucharest (for Radulescu).
2. The "7 Noimbrie" Brick Factory, Bucharest (for Boca).

BOCA, Gejza

Organization of medical care in regions; regional method. Lek. obzor 3 no.3-4:132-136 1954.

1. Z OUNZ, Nova Bana.
(PUBLIC HEALTH,
*in Czech.)

ROSIVAL, L., HOCA, M.

On the problem of the toxic effect of intrathion (Preliminary report). Cesk. hyg. 6 no.10:592-595 D '61.

1. Hygienicky ustav Lekarskiej fakulty University Komenskeho, Bratislava.

(INSECTICIDES toxicol.)

ROSIVAL, L.; BOCA, M.

Toxicology of intrathion. Prac. lek. 13 no.8/9:474-478 N '61.

1. Ustav hygieny lekarskej fakulty Univerzity Komenskeho v Bratislave, prednosta akademik Vojtech Micha.

(INSECTICIDES toxicol)

VULTUR, Ioan, ing.; BOCAN, Gh., ing.

Contributions of the innovation movement in the mechanization field. Rev cailor fer 13 no.2:75-78 F '65.

BOCAN, J.

"Structure of bricks and tiles and the question of their crumbling." (p. 312). STAVIVO (Ministerstvo stavebnich hmot) Praha, Vol 31, No 11, Nov. 1953.

SO: East European Accessions List, Vol 3, No 8, Aug 1954

BOCAN, J.

"Contribution to Comrade Panocha's article on the treatment of refractory materials." (p. 137.) STAVIVO (Ministerstvo stavebnich hmot) Praha, Vol 32, No 4, Mar. 1954.

SO: East European Accessions List, Vol 4, No 8, Aug 1954

RUMANIA/Genital System S-3

Abs Jour : Ref Zhur - Biol., No 7, 1958, No 31307

Author : Burghele T., Iorchin H., Boerneon D.
Inst : Not Given
Title : Histo-Pathological Investigations of a Specimen Obtained by Needle Puncture of the Epididymis.

Orig Pub : Chirurgie, 1956, 5, No 2, 204-208

Abstract : No abstract

Card : 1/1

BOCANET, Ch., ing.; COMANDASU, L., ing.

Establishing the raw material consumption norm for parquetry by the technical and analytic calculus method. In lemnul 15 no.11:426-430 N '64.

BOCANCEA, Gh., ing.

Automatic weighing machines with band conveyers and automatic flow adjustment. Metrologia apl 12 no.3:105-108 Mr '65.

BOCANETE, E., BODNARESCU, D., KINSKY, L.

New improved methods in the exploitation of salt through its dissolution in wells. p. 452

REVISTA MINELOR. (Ministerul Minelor, Ministerul Industriei Petrolului si Chimiei, Directia Exploatarilor Miniere si Asociatia Stiitifica a Inginerilor si Tehnicienilor din Rominia) Bucuresti, Rumania. Vol. 10, No. 11, No.v. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, No. 2, Feb. 1960
Uncl.

BODEANU, Z., ing.; BOCANETE, E., ing.

Twenty years of achievements in the field of salt mining. Rev min 15 no.8:421-424 Ag '64.

: Bocanete, V

RUMANI./Chemical Technology. Chemical Products and Their Application. Corrosion. Corrosion Control. H

Abs Jour: Ref Zhur-Khim., No 8, 1959, 27804.

Author : Adamache, I., Dumici, I., Coc, R., Bocanete, V., and Martinovici, E.

Inst :

Title : Corrosion Protection of Bore Hole Equipment at Rumanian Oil Fields and Late Advances in this Field.

Orig Pub: Petrol si Gaze, 9, No 7, 309-320 (1958) (in Rumanian with German, English, French, and Russian summaries)

Abstract: The authors present data on the utilization of corrosion inhibitors for the protection of pumping station equipment. The results from the application of specially treated equipment (chromium plated plungers, nitrated

Card : 1/2

BOCANICIU, T., fiz.

Time gauge and time unit. Metrologia apl 9 no.1:7-13 Ja-F '62.

BOCANICIU, T., fiz.

Comparison of atomic frequency standards. Metrologia apl 10 no.5:222-232 My '63.

BERKA,A.; SMOLKOVA,E.; BOCANOVSKI,E.

Indirect gasometric determination of urotropin. Cesk. farm. 13 no.3:96-99 Mr'64.

1. Katedra analyticke chemie KU, Praha.

*

RUMANIA 576.8.573.4:616.831.9-002

BOCARNEA, C., Dr, and GAVRILA, F., of IMF [Institutul de Medicina si Farmacie; Medical-Pharmaceutical Institute] Bucharest.

"Straining with Acridine Orange in the Cytodiagnosis of Lymphocytic Meningitis."

Bucharest, Studii si Cercetari de Inframicrobiologie, Vol 17, No 4, 66, pp 285-292

Abstract: In a comparative study involving 85 cases of acute meningitis (20 purulent, 20 tubercular and 65 serous), the authors were able to elaborate a new criterion for the differential diagnosis between tubercular meningitis and other types. The method involves acridine orange straining of the cephalorachidian fluid and study by fluorescent microscopy. Includes 6 figures and 14 references, of which 10 Rumanian, 2 German and 2 English-language.

1/1

BOCEK, Jaromir, dr.

Economical management of the Prague taxicab service. Siln doprava 13 no.2:12-13,26 F '65.